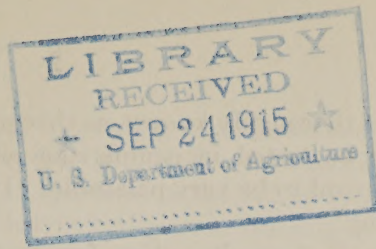


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United States Department of Agriculture,
BUREAU OF PLANT INDUSTRY,
New and Rare Seed Distribution,
WASHINGTON, D. C.

TALL MEADOW OAT-GRASS (*Arrhenatherum elatius*).

Tall meadow oat-grass, sometimes called tall oat-grass, meadow oat-grass, or evergreen grass, is a hardy upright perennial growing to the height of 15 to 30 inches and producing a large number of leaves. It does not propagate by rootstocks and is somewhat inclined to be bunchy. It produces seed in an open head or panicle, somewhat similar to cultivated oats, though the seed is much smaller and more chaffy than that of oats.

Tall meadow oat-grass is a standard grass in parts of Europe and is grown quite generally over the United States, but does not attain much importance in any locality. This is perhaps largely due to the fact that the seed is expensive and that it takes a large quantity per acre to secure a stand. Aside from this, the grass, though succulent, has a peculiar taste which stock apparently do not relish until they have become accustomed to it. It is probable that this quality would not long remain a serious drawback to the growing of the grass, as reports have been received from a number of sections where it is considered very palatable and highly nutritious. Some of our very best forage plants have a similar characteristic. Alfalfa, for example, is in some cases not relished by stock until they have become accustomed to it. One other reason why the grass is not grown more extensively is that it has not received much attention in the way of exploitation from the State experiment stations and other agricultural organizations. In many cases where it could be grown successfully it is almost entirely unknown.

USES AND VALUE.

Tall meadow oat-grass grows well on well-drained soil and seems to be especially adapted to light sandy or gravelly land. It can be used for either pasture or meadow, and when grown for the latter purpose gives a heavy yield of hay. The value of this hay as stock

feed is not thoroughly known, as this grass is not grown to a sufficient extent to be tested in comparison with other grasses. However, the hay is said to be very palatable. It should be cut about the time of blooming.

It gives best results either for pasture or meadow if sown in a mixture with other grasses, especially with orchard grass. A mixture of it with red clover and orchard grass is quite often grown and is a good one, as all of these plants mature at the same time. It would probably do well in a mixture with awnless brome-grass (*Bromus inermis*) in sections where the latter is grown.

Although the grass does not produce a very good sod, it seems to stand pasturing well and furnishes an abundance of grazing. It comes on early in the spring and remains green until late in the autumn. This point is greatly in its favor. It is said by some to be of value as a soiling crop, but it is doubtful whether it can be used profitably for this purpose, as there are other plants that are much better adapted to such a system of feeding.

SEED.

As before stated, its poor seed habit is one of the greatest drawbacks to the popularity of tall meadow oat-grass, for while it produces seed in sufficient quantity, it shatters off before it is fully mature, making it very difficult to harvest. The seed also is of low vitality, and difficulty is experienced in securing a stand. The recognized weight is 14 pounds per bushel, and when purchased from seedsmen it costs from 15 to 25 cents per pound.

SOWING.

Ground on which this grass is to be sown should be plowed thoroughly some time before seeding and well settled by means of a roller, drag harrow, or similar implement. Just before the seed is sown the surface of the ground should be stirred well with a disk harrow. On account of the character of the seed, the best results will be obtained by sowing broadcast, as the seed does not feed evenly through a press drill. With the grade of seed now on the market it is necessary to use from 30 to 50 pounds per acre if sown alone. If sown with orchard grass, 20 pounds of tall meadow oat-grass and 10 pounds of orchard grass is about the right quantity. The seed should be covered evenly, but not to a greater depth than 1 inch, and even less than this is usually desirable.

In sections where there is a reasonable amount of moisture in autumn or late summer and the winters are not too severe, the best

results will probably be obtained by seeding at some time during the month of September or the early part of October. In sections where there is an insufficient amount of moisture in the fall and the winters are cold, or where the ground heaves badly from freezing or thawing during the winter months, spring seeding will give better results. Just how long it will be profitable to leave a meadow or pasture of this grass lie it is difficult to state, as there have been very few experiments in this country to determine this.

Some of the important problems in regard to the culture of this grass are to determine its value and behavior in mixture with other grasses, to secure strains which retain the seed more tenaciously, and to reduce the cost of the seed to about the same as that of meadow fescue and *Bromus inermis*. It is desirable also to determine whether the unpleasant taste attributed to it is of serious importance.

APRIL 5, 1915.

